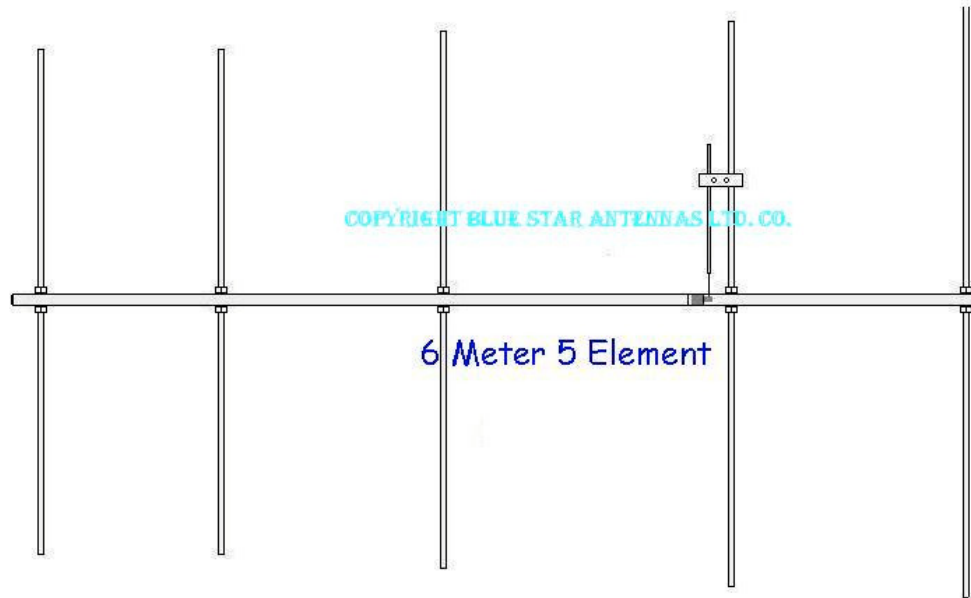


BLUE STAR ANTENNAS

6M-5EL

INSTRUCTIONS AND USE



**"This Antenna conducts electricity Keep away from Power lines"
All ways use safe instillation practices, do not install any antenna on a mast
or tower with in 1 and $\frac{1}{2}$ times the falling distance to any electrical lines!**

PLAN YOUR INSTALLATION CAREFULLY.

If you use volunteer helpers be sure that they are qualified to assist you.

Make certain that everyone involved understands that you are in charge and that they must follow your instructions.

If you have any doubts at all seek a professional antenna installation company to install your antenna.

WARNING

YOU MUST INSURE THAT NEITHER PEOPLE NOR PETS CAN COME IN CONTACT WITH YOUR ANTENNA WHILE IT IS IN OPERATION OR WHILE TUNING. DEADLY VOLTAGES AND CURRENTS MAY EXIST.

SINCE THE EFFECTS OF EXPOSURE TO RF ARE NOT FULLY UNDERSTOOD, LONG TERM EXPOSURE TO INTENSE RF FIELDS IS NOT RECOMMENDED.

DO NOT AIM OR POINT THE ANTENNA AT ANY PERSON OR ANIMAL WHILE IT IS IN OPERATION OR WHILE TUNING.

ALWAYS OBSERVE PROPER RF SAFETY AT ALL TIMES.

THIS ANTENNA IS AN ELECTRICAL CONDUCTOR. CONTACT WITH POWER LINES CAN RESULT IN DEATH, OR SERIOUS INJURY.

DO NOT INSTALL THIS ANTENNA WHERE THERE IS ANY POSSIBILITY OF CONTACT WITH OR HIGH VOLTAGE FROM POWER CABLES OR SERVICE DROPS TO BUILDINGS.

THE ANTENNA, SUPPORTING MAST AND/OR TOWER MUST NOT BE CLOSE TO ANY POWER LINES DURING INSTALLATION,

REMOVAL OR IN THE EVENT PART OF THE SYSTEM SHOULD ACCIDENTALLY FALL.

FOLLOW THE GUIDELINES FOR ANTENNA INSTALLATIONS RECOMMENDED BY THE U.S. CONSUMER PRODUCT SAFETY COMMISSION.

Location of the antenna is very important.

Surrounding objects such as trees, power lines, other antennas, etc. will seriously reduce efficiency. To minimize the effects of surrounding objects, mount the antenna as high and in the clear as possible. If metal guy wires are used, they should be

Tuning your Antenna for Best Results

If you wish to check the VSWR before installation,

Please observe the following procedures, for the best results.

Temporarily mount the antenna with the boom vertical, reflector at least one foot (30 cm) above ground on a non-metallic support, to prevent detuning the antenna. Guy the top of the boom if necessary to prevent it from falling over. Do not use line with wire in it.

- Keep other antennas; metal objects and guy lines clear of the antenna under test.
- Do not attempt to tune the Yagi near the ground with the boom parallel to the ground since ground effects will nullify any adjustment and poor performance may result.
- Run the coax cable from your transmitter to the area in which the antenna is going to be tested. The length of this cable or your feedline is not critical.

1. Connect a good quality SWR bridge to the end of this cable.
2. Connect a short length of cable 10 ft or less from the SWR Bridge to the antenna.
3. Set the transmitter to your center operating frequency.
4. When you read SWR, be sure you move far enough away from the antenna so that your body does not effect the reading.
5. Measure the SWR.

1. If it is high, move the Shorting Bar and/or Tube by 1/4" (.6 cm) in one direction and check the SWR.
2. If the SWR improved, then continue moving the Shorting Bar and/or Tube in the same direction.

6. If the VSWR deteriorated then move the Shorting Bar and/or Tube in the opposite direction.

1. Repeat this procedure until no further improvement can be made.

You have matched your antenna to 50 Ohms. Then tighten all connections. Tape the feedline to the boom and mast.

Your Element 4 YAGI allows for mounting in, Vertical or Horizontal Polarization.

POLARIZATION

You must decide on a mounting position. Prior to assembling the boom.

FEEDLINE

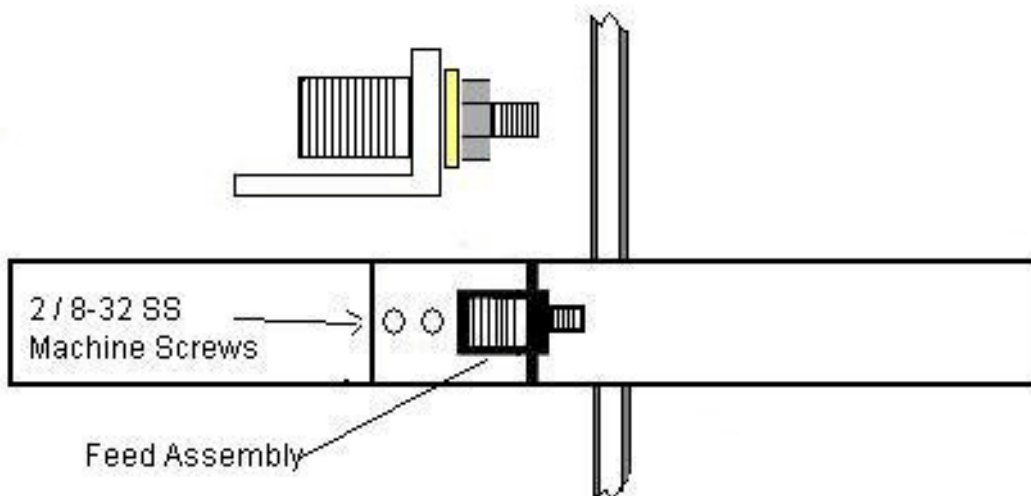
We recommend you use the best quality feed line possible. This will allow the best possible performance

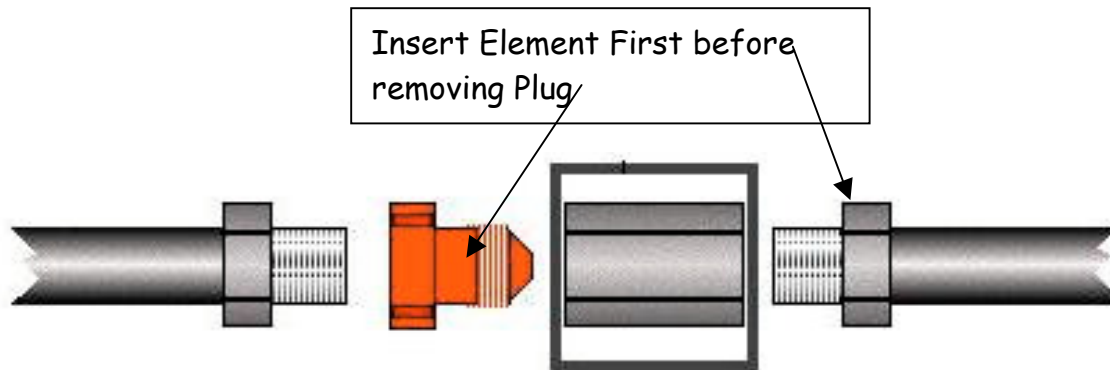
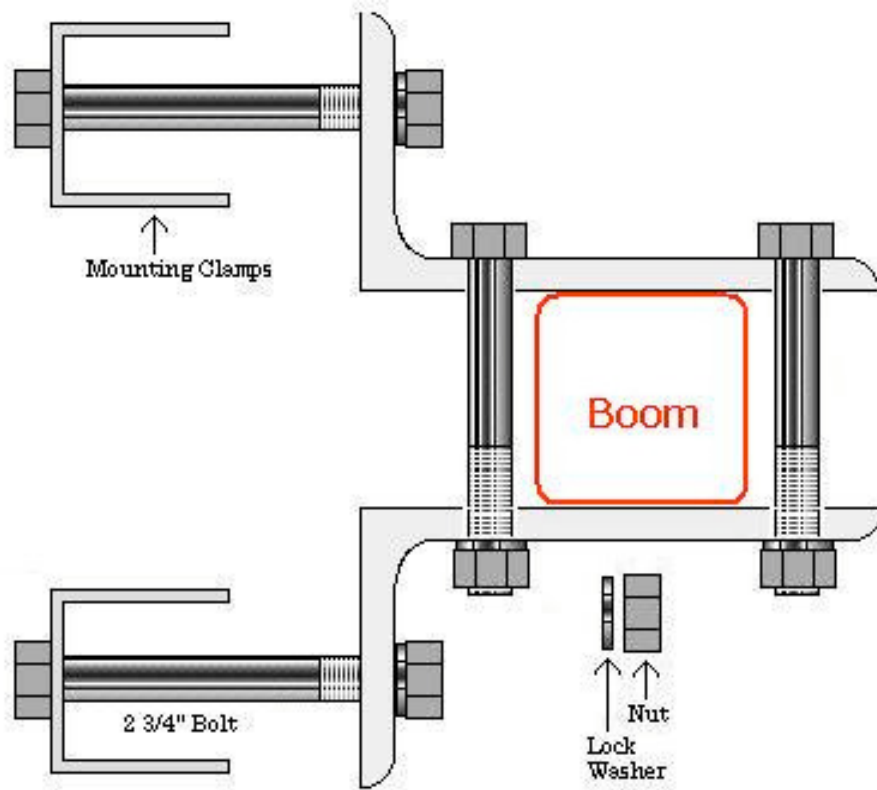
Assemble the boom As pictured

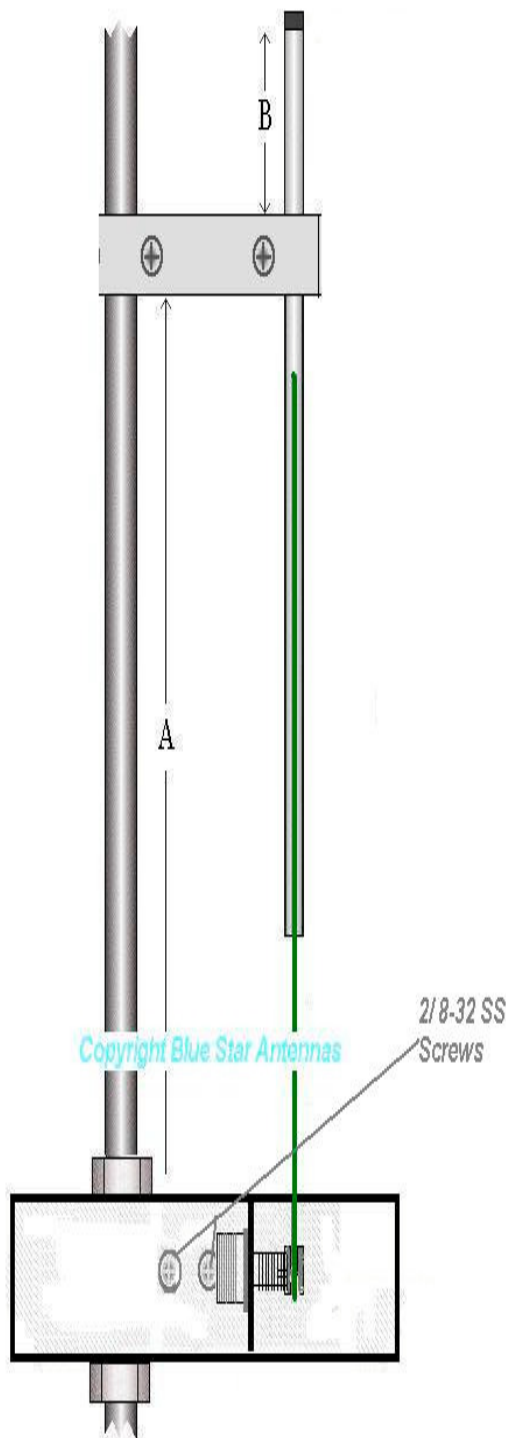
IMPORTANT

Do not remove the red plastic retainers until you install an element in the opposing hole!

- Lay out the element in pairs according to size.
- Screw 1 of the element pairs into proper hole in the boom.
- **Be careful not to cross thread the element.**
- Remove the red plastic retainer and install the opposing element.
- Tighten with 2 - 9/16 wrenches
- **Do not over tighten and strip the threads.**
- Repeat for each set of elements.
- Attach the Feed angle to the boom with the 8-32 SS Screws.
- Assemble the Gamma Feed as pictured.







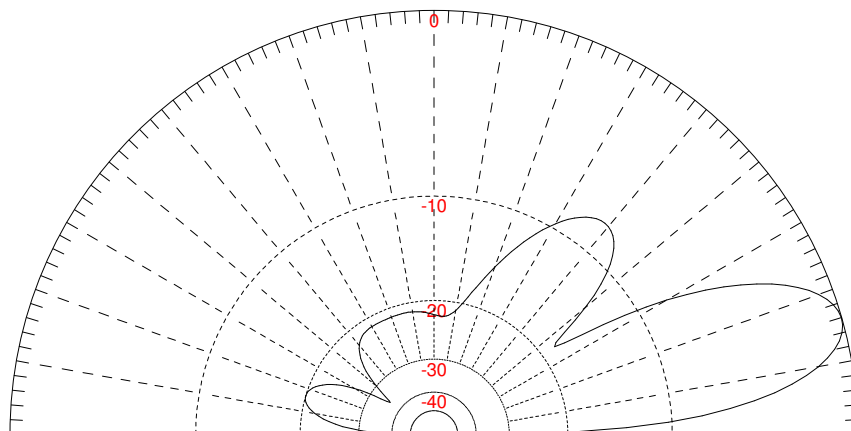
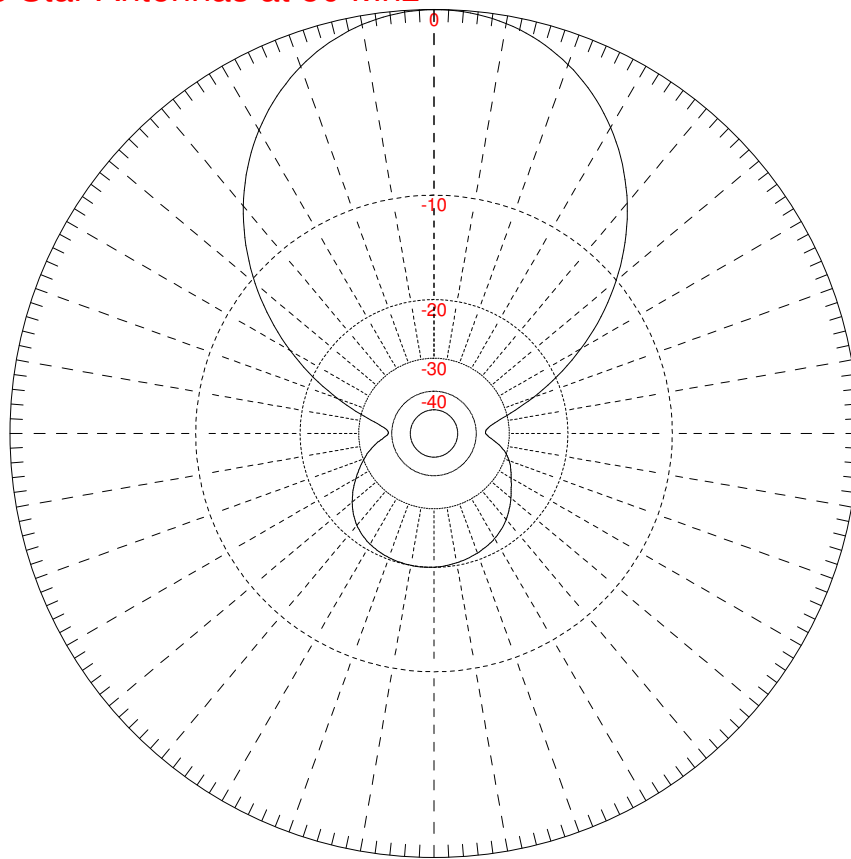
Center Frequency	A	B
50 - 51	12 ½"	7 ½"
51 - 52	16"	4"
52 - 53	22"	0"

The lengths of "A" & "B" should be what ever it takes to get the lowest SWR. On the portion of the band you plan to work. Tune the antenna approx 5-6 ft off the ground, away from metal objects. SWR usually goes doe even more when the antenna is elevated.

A & B both affect SWR
 A effects the frequency
 B Affects the SWR

MMANA-GAL v. 1.1.0.10

Model 52-5EL Blue Star Antennas at 50 Mhz



Ga : 14.56 dBi = 0 dB (Horizontal polarization)
F/B: 19.98 dB; Rear: Azim. 120 dg, Elev. 60 dg
Freq: 50.500 MHz
Z: 40.724 + j0.002 Ohm
SWR: 1.2 (50.0 Ohm), 14.7 (600 Ohm)
Elev: 15.9 dg (Real GND :5.00 m height)

MMANA-GAL v. 1.1.0.10
 Model 52-5EL Blue Star Antennas at 50 Mhz

